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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/792,114	03/02/2004	Theodore R. Whitney		3932

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12/05/2005

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EXAMINER
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NGUYEN, HUNG

ART UNIT	PAPER NUMBER
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2851

DATE MAILED: 12/05/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/792,114	WHITNEY, THEODORE R.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Hung Henry V. Nguyen	2851	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 13 October 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-47 is/are pending in the application.
- 4a) Of the above claim(s) 23-47 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-15, 17 and 20-22 is/are rejected.
- 7) ☒ Claim(s) 16, 18-19 is/are objected to.
- 8) ☒ Claim(s) 1-47 are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 March 2004 is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

## **DETAILED ACTION**

### ***Election/Restrictions***

1. Applicant's election of group I (claims 1-22) in the reply filed on October 13, 2005 is acknowledged. The applicant requests that claims 42-44 are joined with group I since the distinction in the Office Action is drawn only on the asserted basis of simple subclass differences and a search of the subject of group I will disclose the art relevant to these claims. This is not found persuasive because claims 42-44 are drawn to systems for recording images on a recording web having specific web transport systems, as well as imaging assembly for defining a multiply refolded light path, adjusting the magnification and varying the path length of the illumination fields. As such, the distinct and separate searches are quite extensive and places a serious burden on the Examiner in regard to both search and examination. The requirement is still deemed proper and is therefore made FINAL.

### ***Claim Objections***

2. Claim 22 is objected to because of the following informalities: the following terms lack proper antecedent basis in the claim

“the used field” on line 2

“this field” on line 3. Appropriate correction is required.

***Drawings***

3. The drawings of the disclosure is objected to because the applicant does not clarify which of these drawing(s) should be designated by a legend such as --Prior Art—(for example: figure 15) because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled “Replacement Sheet” in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Information Disclosure Statement***

4. The applicant is reminded that the listing of references in the specification is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609.04(a) states, "the list may not be incorporated into the specification but must be submitted in a separate paper." Therefore, unless the references have been cited by the examiner on form PTO-892, they have not been considered.

***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

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A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-10, 13-15, 17, 20-21 are rejected under 35 U.S.C. 102(b) as being anticipated by Dunn et al (U.S.Pat. 6,018,383).

With respect to claims 1-3 and 15, 17, and 20-21, Dunn et al (figure 7) discloses an optical machine for transferring a predetermined pattern formed on a photomask (14) at a master object onto a flexible material (10) at a format plane and comprising all basic features of the instant claims of the present invention such as: a first assembly (12) defining a master object plane and a format plane in spaced apart positions; a second assembly (26) placed between the master object plane and the format plane for transferring successive parts of the image of the master object from the plane of the master object to the format plane; a reversing unit (27) comprising a drive mechanism and the reversing unit can be regarded as a third assembly coupled to the second assembly to move the second assembly reciprocally in a first direction to provide a first dimension of an areal scan pattern; a fourth assembly (40) having a drive mechanism/motor (see col.3, lines64-67) and coupled to the first and second assemblies for moving the first assembly incrementally in a second direction orthogonal to the first direction between the movements of the second assembly to provide a second dimension of the areal scan pattern, a fifth assembly comprising a source of actinic radiation, light mixing means and drive means, part of which moves, coupled with the second assembly, to provide actinic radiation/excimer laser to the part of the image of the master object being transferred (see figure 9; col.10, lines 36-55) and a base structure (12) supporting the five assemblies and providing a flat and orthogonal reference surfaces for the movement of the first and second assemblies and

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wherein the master object (14) is superimposed in registry upon another pre-existing image located in the format plane and wherein the first assembly includes means (40, 42) to incrementally move the master object relative to the format plane in a controlled manner (see figure 7).

As to claims 4-5, Dunn et al discloses the first assembly contains a flexible material at the format plane and the flexible material includes a material sensitive to exposure by actinic radiation on at least one side (see col.3, lines 53-55).

As to claims 6-7, Dunn et al teaches the flexible material is one of a class of material comprising plastic, thin metal, and a composite membrane such as microfilm (see col.3, line 17).

With respect to claim 8, Dunn et al teaches that the flexible substrate can be formed as web and the system for feeding the web through the machine comprises a feed roller supplying the flexible material via one or more guide rollers (30, 31) to a take up roller (37) (see figure 2 and col.4, lines 13-17).

As to claims 9-10, Dunn et al teaches the axes of the feed roller, the guide rollers and the take up rollers are aligned parallel to each other and the web moves in directions that are perpendicular to the axes of the rollers (see figures 1-2).

Regarding claims 13-14, Dunn et al further teaches the second assembly comprising an optical transfer (25-27) with means for changing the magnification of the transferred image in a controlled manner.

***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 11-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dunn et al (U.S.Pat. 6,018,383) in view of Dunn et al (U.S.Pat. 5,897,986).

With respect to claims 11-12, Dunn'383 et al discloses an optical machine comprising substantially all of the limitation of the instant claims. Dunn'383 does not expressly disclose a vacuum platen coupled to the fourth assembly for backing up the flexible material, as recited in the claims 11-12 of the present invention. However, this structure is well known per se. For example, Dunn'986 discloses an optical machine for transferring a pattern formed on a mask onto a substrate and comprising a vacuum platen (see col.7, lines 42-46) for supporting the substrate. In view of such teachings, it would have been obvious to one having ordinary skill in the art at the time the invention was made to combine such teachings to obtain the invention as specified in claims 11-12 of the present application. It would have been obvious to a skilled artisan to employ a vacuum platen as suggested by Dunn'986 into the optical machine of Dunn'383 for the purpose of supporting the flexible substrate.

9. Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Dunn et al (U.S.Pat. 6,018,383) in view of Oshida et al (U.S.Pat. 5,302,999).

With respect to claim 22, Dunn et al discloses an optical machine comprising substantially all of the limitations of the instant claim as discussed except for a fiber cable having

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a plurality of individual fibers as recited in the instant claim. Ohsida et al discloses an optical machine where a illumination light source is provided with a fiber cable (1) having a plurality of individual cables (11) which is driven by a driving system (10) (see figure 1 of Oshida et al). It would have been obvious to one having ordinary skill in the art at the time the invention was made to combine the teachings of Dunn et al and Oshida el al to obtain the invention as specified in claim 22 of the instant application. It would have been obvious to a skilled artisan to utilize the fiber cable as taught by Oshida into the optical machine of Dunn for at least the purpose of providing proper exposure amount along the length of the illumination field and thereby improving the quality of the images to be printed on the substrate.

***Allowable Subject Matter***

10. Claims 16, 18-19 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

11. The following is a statement of reasons for the indication of allowable subject matter: the prior art of record either alone or in combination, neither discloses nor makes obvious the combination of an optical machines comprising, among other features, a first assembly having aerodynamic bearings or a base structure including a guide strip and a second assembly having air bearings, with particular functions and connection between these elements, as recited in the instant claims of the present invention.



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***Prior Art Made of Record***

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.


Jain et al (U.S.Pat. 5,923,403) discloses a projection optical system and has been cited for technical background.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hung Henry V. Nguyen whose telephone number is 571-272-2124. The examiner can normally be reached on Monday-Friday (First Friday off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Judy Nguyen can be reached on 571-272-2258. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

hvn  
12/1/05

  
**HENRY HUNG NGUYEN**  
**PRIMARY EXAMINER**